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EXAMINER

KYLE, MICHAEL J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 07/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,060

Applicant(s)

KLEINHANI, ARNO

Examiner

Michael J Kyle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The substitute specification filed on February 7, 2002, is objected to because paragraph [0005], line 3, recites the phrase “in accordance with claim 19”. The specification can not refer to a specific claim, as the content and scope of that claim may change throughout prosecution. Appropriate correction is required.

Claim Objections

2. The claims are objected to because they include reference characters which are not enclosed within parentheses. For example, line 5 of claim 1 includes the reference characters “BN” which are not enclosed by parentheses.

3. Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

4. Claim 1 is objected to because of the phrase “pin rows” in line 3 of the claim. There is no antecedent basis in the claim for this limitation. The examiner suggests changing this to --tumbler pin rows--.

5. Claim 1 is also objected to because the same reference character (P1) is used for two separate parts, the first position of a tumbler pin row, and a rearmost coding position.

6. Claims 1 and 10-14 are objected to because they fail to show a difference between the blocking groove at the tip of the key, and the control surface and control pin. Based on the

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description in the specification and in the claims, the blocking groove and blocking tumbler pin pair function the same and are located at the same place as the control surface and control pin.

As best understood by the examiner, the control surface is the leading edge of the blocking groove at the tip of the key, and the control pin is the first blocking tumbler pin pair that comes into contact with the control surface.

7. Claims 13 is objected to because of the term “safety elements”. It is unclear whether the “safety elements” are the same as the “security element”, also recited in claims 13. For the purpose of this Office Action, the examiner is treating them as the same feature.

8. Claim 13 is objected to because of the use of the term “market areas”. As defined in the specification, a market area “may be a country or a general distributor” (paragraph [0061], lines 4-5). Based on this definition, it is unclear how a “market area” can be located on a key as claimed in claim 13, and shown in figure 1b.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 3-8, 10, 13, and 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Valdajos-Gallego (U.S. Patent No. 5,533,369), to be referred to as US ‘369 hereafter. US ‘369 discloses a security reversibly key with at least three coding/tumbler pin rows (see figure 4) located on the flat sides of the key, with an assigned cylinder (4) with tumbler pin rows and pairs

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of tumblers (61, 81), the tumbler pin pairs consisting of tumbler pins (61) and counter pins (81) at the positions of the tumbler pin rows of a given bore pattern, wherein, the key has a blocking groove (formed by ribs 31) that runs parallel to an axis of the key from a tip of the key to at least a first position of a tumbler pin row on the key. US '369 also discloses the blocking groove to have a coded blocking depth that in the assigned cylinder at least at a rearmost coding position, a pair of tumbler pins corresponding to a the blocking groove with a blocking tumbler pin and an extended blocking counter pin are received (any tumbler pin received between ribs 31), so that the blocking counter pin impinges on the cylinder housing (4) if the blocking groove is not deep enough and complete insertion of a key with an insufficiently deep blocking groove is blocked by the pair of blocking tumbler pins, following insertion of the key at the rearmost coding position, is also used a coding tumbler pin with coding steps for turning the cylinder. The examiner asserts that if a key with an insufficiently deep blocking groove is inserted into the housing (4) of US '369, the pins will impinge on the housing (4).

11. With respect to claims 3-4, US '369 discloses that at least two different coding positions are provided (33, 36), and the coding positions from two different bore patterns are provided.

12. With respect to claim 5, US '369 discloses the blocking groove (area between ribs 31) which runs at least to the first and rearmost coding positions at the very front of a coding row and by blocking tumbler pins (61) and blocking counter pins (81) corresponding to the coding positions, with coded step depths of these at least two positions at the very front.

13. With respect to claims 6-7, US '369 discloses the blocking groove to have at least two differently shaped sectors (generally rectangular section along majority of the key, and curved section at rightmost end of the groove, shown in figure 4), and that the blocking groove extends

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over more than one coding position and whereby the depth of the blocking groove is constant from one coding position to the next.

14. With respect to claim 8, US '369 discloses the blocking groove to extend over more than one coding position and whereby the width of the blocking groove remains constant from one position to the next.

15. With respect to claim 10, US '369 discloses a rising control face (shown in figure 4) disposed at the tip of the key, the control face pushes an assigned control pin out of the way, whereby the control pin prevents insertion of a key without a control face. The examiner considers the control face and control pin to be the same as blocking groove at the tip of the key because they appear to be located in the same place on the key, and provide an identical function.

16. With respect to claim 13, US '369 discloses a locking system with security reversible keys with at least three coding/tumbler pin rows (figure 4) that are located on the flat sides of the keys, with an assigned cylinder (4) with pin rows of pairs of tumbler pins (61, 81) consisting of tumbler pins (61) and counter pins (81) at the positions of a given bore pattern, wherein at least two areas on the keys are defined such that there is a first area (any area on the key blade) with two additional security elements (36, blocking groove area between ribs 31, and tip of key acting as a control face) with a higher degree of manufacturing difficulty, and a second area (any area containing bore 33) with a more simple basic coding (33), the first area segmented into independent market areas, and the first area has a blocking code (blocking groove formed by ribs 31, and bores). US '269 also discloses the keys having a blocking groove that runs parallel to an axis of the key from a tip of the key to at least a blocking first position of a tumbler pin row on the key, the blocking groove has a coded blocking depth, in the assigned cylinder (4) at least at

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the rearmost coding position, a pair of tumbler pins (61, 81) with a blocking tumbler pin (61) and an extended blocking counter pin (81) corresponding to the blocking groove are provided such that the blocking counter pin (81) impinges on the cylinder housing (4) if the blocking groove is not deep enough to thereby block complete insertion of a key with an insufficiently deep blocking groove by the pair of blocking tumbler pins. US '369 further discloses the blocking tumbler pin (61) with the blocking counter pin (81) after insertions of the key at the rearmost coding position is also utilized as a coding tumbler pin with coding steps for turning the cylinder. The examiner asserts that if a key with an insufficiently deep blocking groove is inserted into the housing (4) of US '369, the pins will impinge on the housing (4).

17. With respect to claims 15 and 16, US '369 discloses the keys to include areas having different bore patterns (33, 36) and that at least three security elements are provided in the first area. The examiner considers the entire key, with the exception of an area around at least one bore (33) to be the first area.

18. With respect to claim 17, US '369 discloses the second coding (36) with a narrow milling is provided. The term "narrow milling" appears to be a process limitation in an article claim and is therefore given little patentable weight.

19. With respect to claim 18, US '369 discloses all of the security elements of the first area are affixed in one coding row (middle row, between the ribs 31).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US '369 in view of Wang (U.S. Patent No. 5,687,594). US '369 recites all of the limitations of claim 1 above, but does not show there to be at least four rows of tumbler pins provided.

22. Wang teaches a cylinder and key assembly wherein the key has four tumbler pin rows (18, on the key, 20 in the cylinder) in order to increase the possible amount of locking combinations. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Wang in order to increase to amount of locking possibilities.

23. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US '369 in view of Keller (U.S. Patent No. 4,325,241). US '369 discloses all of the limitations of claim 1, and the examiner considers the different sized bores (33, 36) of US '369 to be different codings. However, to further show different codings the examiner relies on Keller.

24. Keller teaches a key with at least two different coding provided (figure 7) in order to increase to number of locking possibilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Keller in order to increase the locking possibilities.

25. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US '369. US '369 discloses there to be more than one row of tumbler pins, but not with each row of tumbler pins each having a blocking groove with assigned pairs of blocking tumbler pins. However, increasing the number blocking grooves to match the number of tumbler pin rows is considered

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to be a matter of design choice, as the result produced is an obvious one in that it makes the lock more secure and adds the amount of locking combinations. This result is also achieved by having one blocking groove over no blocking grooves. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add more blocking grooves to a key in increase the number of locking combinations.

26. Claims 10-12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US '369 in view of Kleinhaeny (U.S. Patent No. 5,438,857). US '369 recites all of the limitations of claim 1, and further discloses what the examiner considers to be a control face and a control pin. The examiner also cites Kleinhaeny of teaching this feature.

27. Kleinhaeny teaches a rising control face (SF) that is disposed at the tip of the key, the control face (SF) pushes an assigned control pin (K) out of the way in order to prevent unauthorized keys from being inserted into the housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Kleinhaeny in order to prevent unauthorized keys from being inserted into the housing.

28. With respect to claim 11, Kleinhaeny also teaches the control (K) to be a flat pin that also carries out a flank control at a narrow coding milling (column 1, lines 37-50).

29. With respect to claim 12, US '369 recites all of the limitations of claim 1, and that a row of tumbler pins includes a blocking code and second coding. US '369 does not disclose an insertion blocking system by means of a control face and control pin as well as flank control by means of a flat pin.

30. Kleinhaeny teaches an insertion blocking system by means of a control face (SF) and control pin (K) as well as flank control by means of a flat pin (column 1, lines 37-50) in order to

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prevent unauthorized keys from being inserted into the housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Kleinhaeny in order to prevent unauthorized keys from being inserted into the housing.

31. With respect to claim 14, US '369 recites all of the limitations of claim 13 above, and the examiner contends that US '369 discloses the addition security elements to be a blocking code (blocking groove between ribs 31 and tumbler pins which engage the bores in this region) second coding (36), and an insertion blocking system by means of a control face (tip key) and control pin (first pin to engage the tip of the key when inserted in the cylinder housing). To further show control face and control pin, the examiner cites the teachings of Kleinhaeny. US '369 does not disclose a flank control comprising a flat tumbler pin.

32. Kleinhaeny teaches an insertion blocking system by means of a control face (SF) and control pin (K) as well as flank control by means of a flat pin (column 1, lines 37-50) in order to prevent unauthorized keys from being inserted into the housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Kleinhaeny in order to prevent unauthorized keys from being inserted into the housing.

33. With respect to claim 16, US '369 recites all of the limitations of claim 13 above. The examiner contends that the tip of the key and first tumbler pin it engages can be considered a control face and control, and thereby be considered as an addition security element. However, to further show this, the examiner relies on the teachings of Kleinhaeny.

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34. Kleinhaeny teaches an insertion blocking system by means of a control face (SF) and control pin (K) as well as flank control by means of a flat pin (column 1, lines 37-50) in order to prevent unauthorized keys from being inserted into the housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Kleinhaeny in order to prevent unauthorized keys from being inserted into the housing. Therefore, US '396, once modified as taught by Kleinhaeny, discloses at least three security elements.

35. With respect to claim 18, US '369 recites all of the limitations of claim 13 above. The examiner contends that the tip of the key and first tumbler pin it engages can be considered a control face and control, and thereby be considered as an addition security element. However, to further show this, the examiner relies on the teachings of Kleinhaeny.

36. Kleinhaeny teaches an insertion blocking system by means of a control face (SF) and control pin (K) as well as flank control by means of a flat pin (column 1, lines 37-50) in order to prevent unauthorized keys from being inserted into the housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify US '369 as taught by Kleinhaeny in order to prevent unauthorized keys from being inserted into the housing. Therefore, US '396, once modified as taught by Kleinhaeny, discloses at least three security elements. These three security element may all be affixed in one coding row (middle row, between the ribs 31) of US '369.

37. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US '369 in view of Maas et al (U.S. Patent No. 6,378,739). US '369 recites all of the limitations of claim 13 above, but does not disclose a first area manufactured in a central place of manufacture and a

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second area and equipping of cylinders to be manufactured at a remote location. US '369 also does not disclose the manufacturing to take place in at least two steps whereby the first variable with a higher degree of difficulty are manufactured at a central location and variables with a lower degree of difficulty are manufactured at a decentralized location, that the highest degree of difficulty variables are manufactured centrally, a lower degree of difficulty area is manufactured regionally, and the lowest degree of difficulty area is manufactured locally at the place of application, or that manufacturing of a first area is able to take place decentralized and authorization for a desired operation are controlled and checked from a central location.

38. Maas et al teaches the manufacturing of a liquid dispenser where a container is formed at one location (central), the container is then shipped to a second (remote), location where it is blow molded into a larger container, and then to a final (local) assembly location, where preforms are blow molded into a container having a desired shape, filled with a liquid product, and assembled with dispenser subassemblies (column 13, line 47, to column 14, line 3). Maas et al teaches this process to reduce shipping costs, only a portion of the assembly is shipped, rather than the entire assembly. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to manufacture the lock and key assembly of US '369 at different locations in order to reduce shipping costs. The examiner notes that the manufacturing of the subassemblies, including the forming of the container, is the manufacturing step with the greatest degree of difficulty. The steps following that step decrease in degree of difficulty, as they more oriented to assembling parts that have already been formed.

Conclusion

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39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited to further show the state of the art with respect to coded keys: Wolter (U.S. Patent No. 3,974,670), Wolter (U.S. Patent No. 4,098,104), Gretler, Kuster, Stefanescu, Mottura, and DE 3542008.

40. The following references are cited to further show the state of the art with respect to assemblies that are manufactured at different locations: Townsend and Gripenstroh et al.

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Kyle whose telephone number is 703-305-3614. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

43. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

mk
July 8, 2003



Anthony Knight
Supervisory Patent Examiner
Tech Center 3600